**Abstract of the Disclosure**

This invention provides an isolated nucleic acid molecule encoding a Tumor necrosis factor Receptor-Associated Factor protein-interacting hereditary multiple extoses (TREX) protein and vectors comprising the isolated nucleic acid encoding TREX. This invention also provides a purified TREX protein and antibodies thereto. This invention further provides oligonucleotides capable of specifically hybridizing with the isolated nucleic acid molecule encoding TREX. This invention further provides an antisense oligonucleotide against a genomic DNA molecule encoding TREX. This invention further provides methods of: (1) inhibiting TREX protein interaction, (2) inhibiting overexpression of TREX protein, and (3) inhibiting growth of a tumor. This invention further provides assays for: (1) screening for compounds that inhibit TREX binding, (2) detecting predispositions to cancer comprising TREX mutations, and (3) diagnosing cancer comprising TREX mutations. Finally, this invention provides pharmaceutical compositions comprising oligonucleotides that prevent overexpression of TREX, or antibodies that inhibit binding of TREX.